



This high clearance, self-propelled “Lee Spider” was on display at the recent Sunbelt Ag Expo, equipped with a 30-ft. Smucker sponge wiper mounted on a toolbar.

Self-Propelled Rig Wipes Out Roundup-Resistant Weeds

Before Roundup-ready crops, self-propelled weed wipers were widely used to take volunteer corn – and other tall-growing weeds – out of beans. Now, thanks to Roundup-resistant weeds, it looks like weed-wiping machines are back.

We spotted this high-clearance rig at the recent Sunbelt Ag Expo in Moultrie, Ga. The “Lee Spider” is equipped with a 30-ft. Smucker sponge wiper mounted on a toolbar.

“It’s a small, lightweight, versatile machine that works great and does a cost effective job of controlling weeds in row crops,” says Lynn Lee, LeeAgra, Inc., Lubbock, Texas. “It’s powered by a small 20 hp Kohler engine so it doesn’t use much fuel.

“The basic machine sells for \$20,000 to \$25,000. It’s much smaller than most other

high clearance, self-propelled sprayers where even used ones sell for \$40,000 to \$50,000, and new ones for well over \$100,000.”

According to Lee, the Spider has a long history. “It was first built in the late 1980’s and early 1990’s and designed so that 3 people sat in front, each holding a spray wand. Farmers at that time didn’t want to use their larger horsepower tractors just to spot spray weeds in cotton, soybeans and other row crops.

“When Roundup-ready herbicide came along in the late 1990’s, farmers were able to broadcast Roundup over the entire crop, and that eliminated the need for spot spraying. However, a few years ago pigweed and other weeds began showing resistance to Roundup. Some farmers have been forced to switch to

“Muffin” Tin Solar Panel

“I built a small solar panel to charge batteries using a muffin pan and 12 small solar lights that cost just \$2.87 apiece. It works great,” says Eugene Taylor, Topton, N.C.

He turned the muffin pan upside down and used a grinder to cut out the bottom of the pan’s 12 holes. He removed the batteries and LED bulbs from each solar light, leaving only the small solar panel. He used clear silicone caulking to glue the lights into the holes. After that, he connected the wires from each light together.

“I started at the top and connected all the wires together negative to positive, working across one row and down the next until I reached the bottom,” says Taylor. “This left one negative and one positive loose, one at the top and one at the bottom.

“I bolted the pan to a rectangular sheet of metal and welded a length of pipe onto the back as a stand. I also welded a small wheel rim onto the bottom of the pipe as a base. The panel is placed at an angle so it catches more sun.”

He says the panel puts out about 12 volts in the sun. “It also produces some power on cloudy days. I use it to charge a 12-volt car battery.”

He says his total cost to build the solar panel was less than \$40. “If I did it over again I’d paint the muffin pan with some kind of rust proof paint.”



Eugene Taylor built this small solar panel, using a muffin pan and 12 small solar lights.

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cultivation, but some weeds always escape and come up above the crop as it matures. A smaller, narrow-wheeled machine like ours can get through the crop without damaging it. The sprayer is also widely used in blueberries, vineyards, nurseries and orchard crops as well as chemical company research plots. “The machine’s tall narrow wheels are able to straddle rows of 6-ft. tall blueberry bushes. If you want you can hang hooded sprayers from each side to control weeds,” says Lee.

The Smucker wiper comes in sections that can easily be replaced, without having to replace the entire boom. “We use the Smucker sponge because it doesn’t drip or leak and makes excellent contact with weeds,” notes Lee.

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Hiller Attachment Helps Prep Beds, Plant Potatoes

Rick Ratcliff gets raised beds ready for veggie planting with a potato hiller attachment that was originally designed to make trenches for planting spuds. He modified it to make beds, flatten the tops, and lay drip tape all in one pass.

“We have an acre and a half of potatoes, sweet corn and a 100 by 100-ft. market garden, all on raised beds,” says Ratcliff.

Ratcliff’s hiller attachment consists of two steel arms made out of 2-in. square tubing welded side by side for greater strength. They pin to a female receiver clamped to the hiller’s rear frame. This simple hinge allows the arms to float behind the hiller.

A 5-sided box with a 3 by 18-in. steel plate attaches to the rear half of each arm. Used to prepare vegetable beds, the steel plate drags across the top of the new bed as the hiller forms it. It levels and shapes the beds.

Extending out of the box, behind the plate and down into the newly made bed, is a short length of steel tubing. It makes a small depression for the drip irrigation tape it feeds onto the surface of the bed.

“The beds warm faster and everything grows faster and matures quicker,” says Ratcliff. “Potatoes grow a lot faster in a raised bed than in a trench in the ground.”

This year Ratcliff and his wife grew 25,000 lbs. of potatoes on their raised beds. They sell them from an unmanned roadside stand using a self-serve, honor system.

“It’s been so popular this year that I can hardly keep it stocked and find time for farming,” says Ratcliff.

He can use his hiller attachment to create

“raised trenches” for planting.

“I detach the arms and flip them over,” explains Ratcliff. “The boxes rest on the ground between the two hiller coulters. As I drive across the rototilled field, the ground is thrown up against the sides of the boxes. This creates two 24-in. wide beds with 6-in. wide, 6-in. deep trenches in their centers.”

The boxes were fabricated from 2 by 2-in. steel tubes for internal frames. A 2-in. wide strip of flat steel connects the side frames on five sides. Two side panels made from high-density polyethylene mount to the side frames. The steel plate that flattens the vegetable beds serves, in this case, as weight to keep the boxes from riding up over the dirt.

“The thrown dirt slides off the plastic, and the front of the boxes are angled so they would skid over the tilled field surface,” explains Ratcliff. “One person can walk along the trench and toss potato pieces in while a second person pulls the trench sides down over them.”

When using the arms for vegetable bed flattening, Ratcliff attaches a flat bar between the arms and over the hiller’s disk arm.

“When I lift the hiller, the connecting bar makes sure that the boxes lift as well,” says Ratcliff. “The bar pins at either end so that in the lowered position, the leveling arms are still able to float free.”

Ratcliff has now switched to a modified conventional potato planter that’s been raised to plant into the top of the raised beds.

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Rick Ratcliff gets raised beds ready for veggie planting with a potato hiller attachment originally designed to make trenches for planting spuds.



He modified the attachment to make beds, flatten the tops, and lay drip tape all in one pass.